To: Mann, Laurie[mann.laurie@epa.gov]

From: Zell, Christopher

**Sent:** Fri 12/9/2016 5:05:05 PM

Subject: FW: Budd Inlet

**FYI** 

From: Zell, Christopher

Sent: Friday, December 09, 2016 9:04 AM

**To:** Weiss, Leanne (ECY) < lewe461@ECY.WA.GOV> **Cc:** 'Kolosseus, Andrew (ECY)' < akol461@ecy.wa.gov>

Subject: RE: Budd Inlet

Good Morning Leanne,

Welcome to the TMDL Team! TMDLs can be a lot of fun – in many ways they bring together a bunch of great programs and great people (water quality standards, permits, NPS implementation and more) – plus there is a lot of geeky and interesting technical aspects keep the curiosity bug away ☺.

It was a pleasure meeting you last week and I look forward to working with you on this interesting and important TMDL. I (we) are here to help however we can – just let us know how best to provide guidance. If helpful, we can schedule a regular meeting to discuss emerging issues – such as the interesting one posed by Andrew regarding model grid discretization.

To work through the model grid and associated WQS questions, I propose we schedule a meeting with Ben and I. I can attend in person and work out of the Ops office for the day. What do you think?

Best,

Chris

ED\_001270\_00009926 EPA\_000835

From: Kolosseus, Andrew (ECY) [mailto:AKOL461@ECY.WA.GOV]

Sent: Tuesday, December 06, 2016 8:11 AM

To: Zell, Christopher <zell.christopher@epa.gov>; Weiss, Leanne (ECY)

<lewe461@ECY.WA.GOV>

Subject: Budd Inlet

Chris and Leanne:

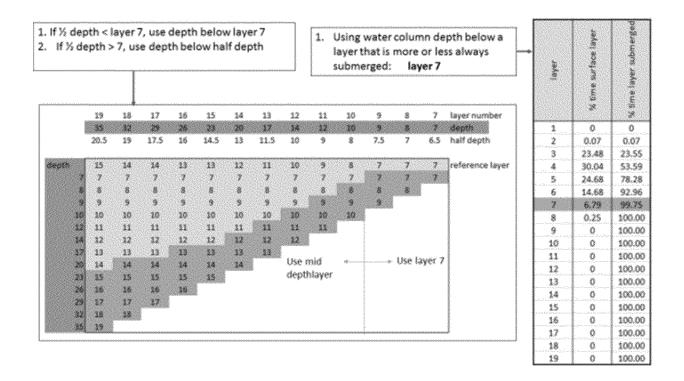
I made a couple of notes from last week's EPA-Ecology meeting on Budd Inlet / South Puget Sound. I wanted to make sure I heard correctly and that we remember where we ended up. Can you both take a look at this and let me know if this is correct?

- 1. EPA agreed that a phased TMDL that set an aggregated allocation at the boundary of Budd Inlet (even though we won't be able to tie it to individual WLA at the end of the pipe for WWTPs) was an acceptable use of the Phased TMDL option. We would need to be open about uncertainty and include schedules for everything, including a Puget Sound TMDL. (Note that Ecology would still need to get internal approval before using this approach).
- 2. EPA understands that there is not a "high" likelihood of solving the capitol lake problem (although there is a good opportunity) and there is no way to meet water quality standards without solving capitol lake problem. If this is the only shortcoming in a future Budd Inlet TMDL, EPA would be able to approve the TMDL.
- 3. We will have future conversations about (a) downstream standards and (b) aesthetic and other non-aquatic life uses.

And there was a brief mention of vertical averaging on the Puget Sound DO project. We're already doing this in Budd Inlet. Chris, please take a look at our approach – attached as a slide, below (let me know if it doesn't come through). Let us know asap if you have an issues with this approach. The basic idea is that model layer 7 has water in is 99.75% of the time (i.e. layer 7 is subtidal). Therefore, in areas of the model with 7, 8, or 9 layers we average layers 7 through 9.

ED\_001270\_00009926 EPA\_000836

In deeper waters, we used the mid depth layers. It's the layers in the darker gray in the plot that we averaged. This approach was used for the slides from the November advisory committee meeting update that I sent to you earlier. If you have concerns or questions, we should add this to the future conversations in #3.



Andrew Kolosseus Washington State Dept. of Ecology PO Box 47775 Olympia, WA 98504-7775 (360) 407-7543

ED\_001270\_00009926 EPA\_000837